Approved for use through 10/31/2002. OMB 0651-003

U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1995, no persons are required to response to a collection of information unless it contains a valid OMB number.

					COMPLETE IF KNOWN	OIPE
Substitute for	form 1449A/PT0			Application Number	09/929,823	(2)
_	INFORMATION DISCLOSURE			Filing Date	August 13, 2001	2
Ī				First Named Inventor	Buddemeier et al.	DEC 1 6 2002 W
,	STATEMENT			Group Art Unit	2671	
	(use as many sheets necessary)			Examiner Name	Unknown	E. S
SHEET 1 OF 1			1	Docket Number	EYEM1380	BADEMARIE

				U.S. PATENT DOCUMEN	NTS	
		U.S. Patent	Document	Name of Patentee or Applicant of Cited Document	Date of Publication	Pages, Columns, Lines, Where
Examiner Initials*	Cite No.1	Number	Kind Code ² (If known)		of Cited Document MM-DD-YYYY	Relevant Passages or Relevant Figures Appear
HC		6,011,562		Gagné	01-04-2000	DEOCH (ED
				•		RECEIVED
						DEC 1 7 2002

	***			F	OREIGN PATENT DOCUMENT	ΓS	reconology Center 250	U
Examiner Initials*	Cite No.1	Office ³	oreign Patent Docu Number⁴		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T6
HC.		PCT	WO99/53443	(II KILOMI)	Eyematic Interfaces, Inc,	10-21-1999		

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Т6
HC	,	Notification of Transmittal of the International Search Report or the Declaration, International Search Report for PCT/US02/23973, mailed 18 November 2002	
HC		VALENTE, Stephanie et al., "A Visual Analysis/Synthesis Feedback Loop for Accurate Face Tracking", Signal Processing Image Comunication, Elsevier Science Publishers, Vol. 16, No. 6, February 2001, pages 585-608	
H		YANG, Tzong Jer, "Face Analysis and Synthesis", June 1, 1999, Retrieved from Internet, http://www.cmlab.csie.ntu.edu.tw/ on 25 October 2002, 2 pg.	
出		YANG, Tzong Jer, "VR-Face: An Operator Assisted Real-Time Face Tracking System", Communication and Multimedia Laboratory, Dept. of Computer Science and Information Engineering, National Taiwan University, June 1999, pgs.1-6	
		Marie Contraction of the Contrac	7/
		11 120	

				72
Examiner Signature	alle	Date Considered	12/8/03	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standart ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

Approved for use through 10/31/2002. OMB 0651-003

U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 9922 no persons are required to response to a collection of information unless it contains a valid OMB number.

COMPLETE IF KNOWN

Substitute	for form 1449A/PTC	~ 7		Š	COMPLETE IF	KNOWN
INFORMATION DISCLOSE		OCT 2 2 2	Moplication Number	09/929,823		
	INFORMAT	ION DISCLOSE	RE	Filing Date	August 13, 2001	
1 ′	JIAIEWIEN	ny sheets necessary	<i>7</i> 2.	First Named Inventor	Buddemeier et al.	RECEIVED
	(,,,,	TRADEM	Proup Art Unit	2671	HECEIVED
1.				Examiner Name	Unknown	DOT 9 4 3003
SHEET	1	OF	4	Docket Number	EYEM1380	0C X 4 X 90Z

				U.S. PATENT DOCUMEN	NTS	Tachnology Center 2600
		U.S. Patent	Document	Name of Patentee or Applicant	Date of Publication	Pages, Columns, Lines, Where
Examiner Initials*	Cite No.1	Number	Kind Code ² (If known)	of Cited Document	of Cited Document MM-DD-YYYY	Relevant Passages or Relevant Figures Appear
He	1	4,725,824		Yoshioka	02/16/88	
	2	4,805,224		Koezuka et al	02/14/89	
	3	4,827,413		Baldwin et al.	05/02/89	
	4	5,159,647		Burt	10/1992	
	5	5,168,529		Peregrim et al	12/01/92	
	6	5,187,574		Kosemura et al.	02/16/93	
	7	5,220,441		Gerstenberger	06/15/93	
	8	5,280,530		Trew et al	01/1994	
	9	5,333,165		Sun	07/26/94	
	10	5,383,013		Cox	01/17/95	
	11	5,430,809		Tomitaka	07/04/95	
He	12	5,432,712		Chan	07/11/95	

				· F	OREIGN PATENT DOCUMENT	'S		
Evaminor Cito		Foreign Patent Document		Name of Patentee or Applicant	Date of Publication	Pages, Columns, Lines,		
Initials*	Examiner Cite Initials* No.1	Office ³	Number⁴	Kind Code ⁵ (If known)	of Cited Document	of Cited Document MM-DD-YYYY	Where Relevant Passages or Relevant Figures Appear	T _e
the	13	DE	4406020	C1				No
+	14	EP	0807902	A2	Cyberclass Limited	11/1997		

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Te
He	15	International Search Report for PCT/US99/07935	
1	16	Akimoto, T., et al., "Automatic Creation of Facial 3D Models", IEEE Computer Graphics & Apps., pp.16-22, Sept. 1993.	
	17	Ayache, N. et al., "Rectification of Images for Binocular and Trinocular Stereovision", Proc. Of 9th Int'l., Conference on Pattern Recognition, 1, pp. 11-16, Italy, 1988.	
1	18	Belhumeur, P., "A Bayesian Approach to Binocular Stereopsis", Int'l. J. Of Computer Vision, 19 (3), Pp.237-260, 1996.	
	19	Beymer, D. J., "Face Recognition Under Varying Pose", MIT A.I. Lab, Memo No. 1461,pp. 1-13, 12/93.	
	20	Beymer, D.J., "Face Recognition Under Varying Pose", MIT A.I. Lab. Research Report, 1994, pp. 756-761.	
	21	Buhmann, J. et al., "Distortion Invariant Object Recognition By Matching Hierarchically Labeled Graphs", In Proceedings IJCNN Int'l Conf. Of Neural Networks, Washington, D.C. June 1989, pp. 155-159.	
	22	DeCarlo, D., et al., "The integration of Optical Flow and Deformable Models with Applications to Human Face Shape and Motion Estimation", pp. 1-15, In Proc. CVPR '96, pp. 231-238 (published)[TM 18.9.96].	
	23	Devernay, F. et al., "Computing Differential Properties of 3-D Shapes from Steroscopic Images without {3-D} Models", INRIA, RR-2304, pp. 1-28, Sophia, Antipolis, 1994.	
H	24	Dhond, U., "Structure from Stereo: a Review", IEEE Transactions on Systems, Man, and Cybernetics, 19(6), pp.1489-1510, 1989.	

Examiner Signature	alulu	Date Considered	12/8/03

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standart ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

approved for use through 10/31/2002. OMB 0651-003

U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Actor of Possis persons are required to response to a collection of information unless it contains a valid OMB number.

COMPLETE IF KNOWN Substitute for form 1449A/PTO OCT 22 Michigan Number 09/929.823 INFORMATION DISCLOS Filing Date August 13, 2001 STATEMENT BY APPLICANT RADEMA Buddemeier et al. Firex Famed Inventor (use as many sheets necessary) oup Art Unit 2671 **Examiner Name** Unknown <u> Technology Center 2600</u> SHEET OF 4 **Docket Number** EYEM1380

				U.S. PATENT DOCUME	NTS	
F		U.S. Patent Document		Name of Patentee or Applicant	Date of Publication	Pages, Columns, Lines, Where
Examiner Initials*	Cite No.1	Number	Kind Code ² (If known)	of Cited Document	of Cited Document MM-DD-YYYY	Relevant Passages or Relevant Figures Appear
HE	25	5,511,153		Azarbayejani et al.	04/23/96	
	26	5,533,177		Wirtz et al.	07/02/96	
	27	5,550,928		Lu et al	08/1996	,
	28	5,581,625		Connell	12/1996	
	29	5,588,033		Yeung	12/24/96	·
1	30	5,680,487		Markandey	10/21/97	
	31	5,699,449		Javidi	12/16/97	
	32	5,714,997		Anderson	02/03/98	
	33	5,715,325		Bang et al	02/03/98	
	34	5,719,954		Onda	02/17/98	
	35	5,736,982		Suzuki et al.	04/07/98	
	36	5,764,803		Jacquin et al.	06/09/98	
	37	5,774,591		Black et al.	06/30/98	
	38	5,802,220		Black et al	09/1998	
	39	5,809,171		Neff et al	09/15/98	
	40	5,828,769		Burns	10/27/98	
	41	5,917,937		Szeliski et al	06/1999	
	42	5,982,853		Liebermann	11/1999	
	43	5,995,119		Cosatto et al	11/30/99	
J	44	6,044,168		Tuceryan et al	03/2000	
HC	45	6,052,123		Lection et al	04/2000	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	.,
Examiner Cite Initials* No.1		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Le
H.	46	Fleet, D.J., et al., "Computation of Component Image Velocity from Local Phase Information", Int., J. Of Computer Vision, 5:1, pp. 77-104 (1990).	
	47 ·	Fleet, D.J., et al. Measurement of Image Velocity, Kluwer Academic Press, Boston, pp. I-203,1992.	
	48	Hall, E.L., "Computer Image Processing And Recognition", Academic Press 1979, 99. 468-484.	
	49	Hong, H.,et al., "Online Facial Recognition based on Personalized Gallery", Proceedings of Int'l Conference On Automatic Face And Gesture Recognition, pp. 1-6, Japan April 1997	
	50	Kolocsai, P., et al, "Statistical Analysis of Gabor-Filter Representation, Proceedings of International Conference on Automatic Face and Gesture Recognition, 1997, 4 pp.	
	51	Kruger, N., "Visual Learning with a priori Constraints", Shaker Verlag, Aachen, Germany, 1998, pp. 1-131.	
	52	Kruger, N., et al, "Principles of Cortical Processing Applied to and Motivated by Artificial Object Recognition", Institut fur Neuroinformatik, Internal Report 97-17, Oct. 97, pp. 1-12.	
He	53	Kruger, N., et al, "Autonomous Learning of Object Representations Utilizing Self-Controlled Movements", 1998, Proceedings of NN98, 5 pp.	

	Examiner Signature	Alules	Date Considered	12	18/03
--	--------------------	--------	-----------------	----	-------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standart ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

Approved for use through 10/31/2002. OMB 0651-003

U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1995, no persons are required to response to a collection of information unless it contains a valid OMB number.

COMPLETE IF KNOWN OCT 2 2 2002 Substitute for form 1449A/PTO ^CApplication Number 09/929,823 Filing Date INFORMATION DISCESSURE August 13, 2001 First Named Inventor Buddemeier et al STATEMENT BY APPLICATEDEMARY **Group Art Unit** 2671 (use as many sheets necessary) **Examiner Name** Unknown SHEET OF 4 **Docket Number** EYEM1380

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.1	1		
He-	54	Kruger, N., et al, "Object Recognition with a Sparse and Autonomously Learned Representation Based on Banana Wavelets", Internal Report 96-11, Institut fur Neuroinformatik, Dec. 96, pp. 1-24.		
	55	Kruger, N., et al, "Object Recognition with Banana Wavelets", European Symposium on Artificial Neural Networks (ESANN97), 1997, 6 pp.		
	56	Kruger, N., "An Algorithm for the Learning of Weights in Discrimination Functions Using a priori Constraints", IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 19, No. 7, July 1997, pp. 764-768.		
	57	Lades, M., et al, "Distortion Invarient Object Recognition in the Dynamic Link Architecture", IEEE Transactions on Computers, Vol. 42, No. 3, 1993, 11 pp.		
	58	Luong, Q. T., et al, "The Fundamental Matrix, Theory, Algorithm, and Stability Analysis", INRIA, 1993, pp. 1-46.		
	59	Manjunath, B. S., et al, "A Feature Based Approach to Face Recognition", In Proceedings IEEE Conference on Computer Vision and Pattern Recognition, pp. 373-378, 3/92.		
	60	Mauer, T., et al, "Single-View Based Recognition of Faces Rotated in Depth", In Proceedings of the International Workshop on Automatic Face and Gesture Recognition, pp. 248-253, Zurich, CH, June 26, 1995.		
	61	Mauer, T., et al, "Learning Feature Transformations to Recognize Faces Rotated in Depth", In <i>Proceedings of the International Conference on Artificial Neural Networks</i> , Vol. 1, pp. 353-358, Paris, France, October 9-13, 1995.		
	62	Mauer, T., et al, "Tracking and Learning Graphs and Pose on Image Sequences of Faces", Proceedings of 2nd International Conference on Automatic Face and Gesture Recognition, October 14-16, 1996, pp. 176-181.		
	63	Maybank, S. J., et al, "A Theory of Self-Calibration of a Moving Camera", International Journal of Computer Vision, 8(2), pp. 123-151, 1992.		
	64	McKenna, S.J., et al, "Tracking Facial Feature Points With Gabor Wavelets and Shape Models, (publication & date unknown), 6 pp.		
	65	Okada, K., et al, "The Bochum/USC Face Recognition System", 19 pp. (publication & date unknown).		
	66	Okutomi, M., et al, "A Multiple-Baseline Stereo", IEEE Trans. on Pattern Analysis and Machine Intelligence, Vol. 15, No. 4, pp. 353-363, Apr. 1993.		
	67	Peters, G., et al, "Learning Object Representations by Clustering Banana Wavelet Responses", Tech. Report IR-INI 96-09, Institut fur Neuroinformatik, Ruhr Universitat, Bochum, 1996, 6 pp.		
	68	Phillips, P. J., et al, "The Face Recognition Technology (FERET) Program", Proceedings of Office of National Drug Control Policy, CTAC International Technology Symposium, August 18-22, 1997, 10 pages.		
	69	Pighin, F, et al, "Synthesizing Realistic Facial Expressions from Photographs", In SIGGRAPH 98 Conference Proceedings, pp. 75-84, July 1998.		
70		Roy, S., et al, "A Maximum Flow Formulation of the N-Camera Stereo Correspondence Problem", IEEE, Proceedings of International Conference on Computer Vision, Bombay, India, Jan. 1998, pp. 1-6.		
	71	Sara, R. et al "3-D Data Acquision and Interpretation for Virtual Reality and Telepresence", Proceedings IEEE Workshop Computer Vision for Virtual Reality Based Human Communication, Bombay, Jan.1998, 7 pp.		
	72	Sara, R. et al "Fish-Scales: Representing Fuzzy Manifolds", Proceedings International Conference Computer Vision, ICCV '98, pp. 811-817, Bombay, Jan. 1998.		
	73	Sara, R., et al, "On Occluding Contour Artifacts in Stereo Vision", <i>IEEE, Proceedings of Interrnational Conference Computer Vision and Pattern Recognition,</i> Puerto Rico, 1997, 6 pp.		
	74	Steffens, J., et al, "PersonSpotter - Fast and Robust System for Human Detection, Tracking, and Recognition", Proceedings of International Conference on Automatic Face and Gesture Recognition, 6 pp., Japan - April 1998.		
HC	75	Theimer, W. M., et al, "Phase-Based Binocular Vergence Control and Depth Reconstruction using Active Vision", CVGIP: Image Understanding, Vol. 60, No. 3, Nov. 1994, pp. 343-358.		

	· · · · · · · · · · · · · · · · · · ·		
Examiner Signature	aulus	Date Considered	12/8/03

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standart ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.

O " " &

PTO/SB/08B (08-00) Approved for use through 10/31/2002. OMB 0651-003

U.S. Patent & Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Action of 1925, no persons an equired to response to a collection of information unless it contains a valid OMB number.

COMPLETE IF KNOWN Substitute for form 1449A/PTO **Application Number** 09/929.823 **Filing Date** August 13, 2001 INFORMATION DISCLOSURE First Named Inventor Buddemeier et al. STATEMENT BY APPLICANT Technology Center 2600 **Group Art Unit** 2671 (use as many sheets necessary) **Examiner Name** Unknown SHEET OF 4 **Docket Number** EYEM1380

•		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Cite No.1		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published			
TC	76	Tomasi, C., et al., "Stereo Without Search", Proceedings of European Conference on Computer Vision, Cambridge, UK, 1996, 14 pp. (7 sheets).			
\	77	Triesch, J., et al, "Robust Classification of Hand Postures Against Complex Backgrounds", Proceedings of the Second International Conference on Automatic Face and Gesture Recognition, Killington, VT, October 1996, 6 pp.			
	78	Turk, M., et al, "Eigenfaces for Recognition", Journal of Cognitive Neuroscience, Vol. 3, No. 1, pp. 71-86, 1991.			
	79	Wiskott, L., et al, "Face Recognition and Gender Determination", Proceedings of International Workshop on Automatic Face and Gesture Recognition, pp. 92-97, Zurich CH, June 26, 1995.			
	80	Wiskott, L., et al, "Face Recognition by Elastic Bunch Graph Matching", Internal Report, IR-INI 96-08, Institut fur Neuroinformatik, Ruhr-Universitat, Bochum, pp. 1-21, April 1996.			
	81	Wiskott, L., "Labeled Graphs and Dynamic Link Matching for Face Recognition and Scene Analysis", Verlag Harr Deutsch, Thun-Frankfurt am Main. Reihe Physik, Dec. 1995, pp. 1-109.			
	82	Wiskott, L., "Phanton Faces for Face Analysis". Proceedings of 3rd Joint Symposium on Neural Computation, Pasadena, CA, Vol. 6, pp. 46-52, June 1996.			
	83	Wiskott, L., "Phanton Faces for Face Analysis". Internal Report, IR-INI 96-06, Institut fur Neoroinformatik, Ruhr-Universitat, Bochum, Germany, April 1996, 12 pp.			
	84	Wiskott, L. "Phantom Faces for Face Analysis", Pattern Recognition, Vol. 30, No. 6, pp. 837-846, 1997.			
	85	Wiskott, L., et al, "Face Recognition by Elastic Bunch Graph Matching", IEEE Transactions on Pattern Analysis and Machine Intelligence, 19(7), pp. 775-779, 1997.			
	86	Wong, R., et al, "PC-Based Human Face Recognition System", IEEE, pp. 641-644, 1992.			
	87	Wurtz, R., "Object Recognition Robust Under Translations, Deformations, and Changes in Background", <i>IEEE Transactions on Patern Analysis and Machine Intelligence</i> , Vol. 19, No. 7, July 1997, pp. 769-775.			
	88	Wurtz, R., et al, "Corner Detection in Color Images by Multiscale Combination of End-stopped Cortical Cells", Artificial Neural Networks - ICANN 97, Lecture Notes in Computer Science, Vol. 1327, pp. 901-906, Springer-Verlag, 1997.			
HC	89	Yao, Y., et al, "Tracking a Dynamic Set of Feature Points", IEEE Transactions on Image Processing, Vol. 4, No. 10, October, 1995, pp. 1382-1394.			
		·			
		· · · · · · · · · · · · · · · · · · ·			
	ļ				

	W D			
Examiner Signature	allly	Date Considered	12/8/03	

^{&#}x27;EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two letter-code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached.